14:Bandelier E-4 (no date)1880 NU7 Aztec NU7

the other hand, the fresh water emptying out of Lake Xochimilco was thrown to the east side of the dyke into Lake Tezcuco. By this simple contrivance the Mexicans surrounded their pueblo with a huge pond on all sides, isolating, or rather *fortifying* it beyond all conceivable means of Indian assault.[197] *The causeways leading to Mexico were, therefore, military constructions.*[198] Subsequently the dyke was continued to the north until where Guadalupe Hidalgo now stands (anciently Tepeyacac), thus closing up the western basin completely, and another causeway, running east and west was constructed to Tacuba. From the southern dyke a branch ran to Cuyuacan, starting at Xoloc and extending to the southwest. In order to insure free circulation of the waters, sluices were cut, which interrupted the causeways at several places. Wooden bridges, easily removable, were laid across these ditches. Thus Mexico needed no outer fortifications nor walled enclosures.[199]

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one inch higher than the level of Lake Tezcuco. This elevation was purely artificial (Humboldt, "Essai politique sur la Nouvelle Espagne," Paris, 1827. Vol. II, pp. 96, 97 and 98). After the causeways running north and south had been constructed, the waters emptying into the swamp from the west side could not any longer run freely into the salt-water basin of Tezcuco. They were actually kept around the pueblo, and the swamp thus changed into a lagune. That those sources were powerful enough for such a purpose is amply shown by the great inundation which their careless opening occasioned under Ahuitzotl, in 1498 ("Essai politique," Vol. II, p. 101), of which the old authors bear ample testimony. (Durán, Cap. XLVIII and XLIX.) (Tezozomoc, Cap. LXXX.) (Ixtlilxochitl, "Hist. des Chichimèques," Cap. LXVI.) (Torquemada, Lib. II, cap. LXVII, pp. 192 and 193.)

[197] The levels of Lakes Xochimilco and Chalco are 1 vara 11 inches higher than the "plaza mayor" of Mexico. Their outlet is to the northwest, between Churubusco and Iztapalapan. Previously, when Mexico was surrounded by water, this outlet was between Mexicalzinco and Churubusco (then called "Huitzilopochco"). At Churubusco the great causeway began, and the waters emptying out of Lake Xochimilco flowed along its right hand side into Lake Tezcuco. The causeways thus increased the effects of natural drainage upon the central basin. It was certainly a very primitive but very effective work on the part of the Mexicans. We find a parallel to it, at a comparatively recent date, in Bolivia. When Andrés Tupac Amaru, the son of the unfortunate José Gabriel Condorcanqui, was blockading Sorata, in 1782, he could not, without artillery, hope to succeed against the well fortified town. Therefore, by a system of circumvallation, he enclosed the town with the waters of the Sierra, which finally destroyed the earthworks, leaving the entrance free to the infuriated Indians. 22,000 whites perished in the massacre ensuing.

[198] It is to the Hon. L. H. Morgan that we owe the first intimation in regard to the true character and purpose of these causeways. They were not merely for the purpose of insuring communication with the mainland, but especially for the defence of Mexico. Without them the area extending between the pueblo and the western shore would, at best, have remained a swamp, or would have become, as it now is, dry land. In both cases the defensive power of the Mexicans was at an end, and the course of events in Mexico would have turned quite differently.

[199] Mention is made of a fortification of some kind at "Xoloc," where the branch dyke from Cuyuacan joined the main causeway. (This must have been in the neighborhood of San Antonio.)